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(54) Titre : METHODE ET SYSTEME DE DISTRIBUTION DE SUPPORTS NUMERIQUES
(54) Title: DIGITAL MEDIA DISTRIBUTION METHOD AND SYSTEM

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Digital Media Distribution System

The **marketable advantage** of the MP3 Encrypted (MPE) digital media distribution
system is that it enables content owners to distribute their content in a digital format through the
5   Internet and other networks rather than on a physical media. The distributed file contains
security features to prevent unauthorized duplication, can be redistributed and passed along, is
a multimedia file, contains electronic commerce capabilities directly from the file, and contains
digital rights management ensuring that revenues are distributed to the respective rights
holders.

10   In the current distribution model, content is shipped on physical media such as floppy
disks, compact disks (CD's), DVD's and other media known in the art. The disadvantage to this
approach is that because of inventory, marketing and distribution costs, the amount of content
that can be made available to the consumer is limited. For example, in the music industry, the
four major record companies will not carry or market artists who sell less than one hundred
15   thousand units of a CD.

Other companies have experimented with encrypting media for web page distribution
over the Internet. This process is similar to shrink wrapping a CD and putting it in a store. It is
only part of the solution.

The MPE digital media distribution system has a number of key features which make it
20   unique. This is how it provides the marketable advantage.

1.   The file format

- This multimedia format allows for text, graphics and imagery, video, music nd executable
  files to be combined and wrapped into a single file. Time stamps synchronise audio and
25   video events.
- when clicked on, the file will execute and self play; that is, the music will play and the
  visuals are displayed. The user does not need to download and configure a player
  application.
- the file will play a "preview or teaser" for free. This allows for "ad supported" files and
30   "viral marketing" as the file can be freely shared over the Internet
- the user purchases a "song key" from within the MPE by clicking on the purchase track

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button. This key (purchased from our server) locks the file to a "digital fingerprint" of the user's computer and to registration ID's in portable devices. This registration is uploaded to our server, so the user will not lose their content in the case of a hardware failure and to prevent the playback of the file in other peoples computers and hardware devices.

5 • the MPE also links to the artists web page (from the "web" button) and a web page where a CD can be purchased ("Purchase CD" button)

   • the Destiny Media Player is part of the file (and runs in the background) and can be installed to the users computer directly from the file – this is optional

10 **MPE Features Summation:**

Contains

   • compressed audio file
   • Visuals elements including graphics or imagery, text data and executable files
   • Built in electronic commerce
15 • Web links to artist web site and merchandise purchase
   • Security features to prevent unauthorized duplication
   • Viral pass-a-long capabilities
   • Digital rights management system
   • Optional installation of Destiny Media Player (included)

20

2.   Compatibility

   • the MPE format is designed to be extendable. It can be licensed to hardware platforms and portable devices which may have resource limitations. It can be securely transferred to hardware devices which support other audio compression formats and/or encryption
25 techniques.

3.   Distribution

The components provided by Destiny to facilitate the Mpe distribution system includes:

30 **Destiny Media Player:**

The world's smallest, most powerful and versatile digital music player, the Destiny Media

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Player is Macintosh or PC compatible and plays digital music files or Internet radio broadcasts. It is a 400K download.

The Destiny Media Player plays Mpe, mp3, streaming mp3 radio and files, .wav and wmf files, and audio CDs, all using a familiar and easy to use home stereo style interface. It finds
5   media files on your computer with a library builder and allows you to browse by file name. The Media Player also dynamically categorizes and lists all live RadioDestiny broadcasters.

Mpe broadcasts include the streaming of visual metadata including graphic, visuals and text. The station also allows web links, ecommerce for merchandise purchase and a download track button.
10

MPE radio broadcast: Destiny will automatically setup a 24/7 Mpe internet radio station which displays the MPE in a pop up window as the music plays. The Mpe is visual metadata and changes with each song streamed so that the listener can preview the artist and track and on
15   impulse link to the artists web site, purchase the CD or download the track being played.

Web Page Hosting: As part of the system, Destiny will automatically setup a form based web page for the artist who can then host 5 songs per page. Using the proprietary Clipstream audio streaming technology, this component of the MPE media distribution system allows the audio to be previewed on an on-demand basis from the web page. Because it is java based, clipstream
20   works without requiring the user to download or configure a separate player application.

4.   Digital rights management
•   when the file is first created, the encoder software adds a digital id/watermark which identifies the person that encoded the file via the registration of the encoding software
25   •   the encoding process also adds copyright ownership and royalty payment information for each file, this information is then uploaded to our server and linked to the file if the person chooses to participate in the e-commerce system.
•   At the purchase point, the information of the purchaser is also added and uploaded to our server, electronic commerce is executed, and the file is unencrypted and locked to
30   the purchasers hard drive and/or portable device
•   The fingerprint of the purchasers computer and the ID from the portable device is also

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uploaded to our server and linked to the file

- After the file is purchased, our server tracks and distributes the revenue as per the royalty payment defined by the encoding process

5   **5.   Digital wallet**

- customer pays a certain amount in advance via credit card. The MPE format allows micropayments from our server and account tracking for the customer.

The **technical features** required to make this system work:

10   - the Mpe encoder rips the audio file into mp3 format and encodes all the files into the Mpe format and encrypts it with a key tied to the registered owner of the Mpe encoding software

- an internet connection with the server is required to upload the digital rights information and download a key tied to this file. This key is used to re-encrypt the file.

15   - when a user purchases the song, the song key is encrypted with a session key unique to that user. The session key is tied to a record in our database which is tied to a fingerprint of that user.

The **problem** the inventor is trying to solve is to allow media to be distributed and sold digitally
20   through the internet and other networks, while preventing unauthorized duplication and ensuring that the appropriate copyright holders are paid. How the problem is solved is by building this distributable format, digital rights and e-commerce directly into the file containing the audio content.

25   The **problem** the inventor is trying to solve is to allow artists to get their content into consumer's hands without requiring the user to install and utilize any additional player application software. How the problem is solved is by building playback functionality into the file.

The **problem** the inventor is trying to solve is to allow the artist to preview music on a web page.
30   How the problem is solved is by providing java based streaming audio preview technology.

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6.   An existing solution to distributing files digitally is provided by Liquid Audio. They
      encode the file, but require an external player application for playback. They do not
      provide hardware or portable device compatibility. They do not offer a java based
      streaming audio streaming technology to preview the music on a website or the ability to

5   set up and provide internet radio stations with streaming visual metadata.

7.   Preferred embodiment of the invention incorporates:
*   audio compression and streaming technologies
*   a digital media player technology that was less than 300K in size
10   *   encryption and tracking technologies
*   ripper encoding software
*   internet radio broadcast software
*   java based audio streaming technology

15   **8.   Problems another company may run into:** Incorporating the essence of the invention
      into other systems is generally straightforward, however other technologies will have
      difficulty with:
*   building a self executing file without significantly impacting the file size
*   tracking the file. They'd need to develop encoding software and set up a server side
20   database.
*   distribution. They'd need to license an Internet radio broadcast software such as
      RealAudio and license a java based preview solution such as Audiobase.

9.   Prior art:
25   *   Internet radio: Real Audio, Windows Media
*   MP3 security: Liquid Audio
*   Music previewing: Audiobase, Emblaze
*   Digital rights: Reciprocal
*   digital watermarking - Cognicity
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10.   Summary of Method:

- there are three parties involved in a transaction:
    - the end user who wishes to download and execute the media file;
    - the provider of the media file, who may be a record company, distributor, artist or similar source of media files; and
    - the Mpe Server that coordinates distribution of keys and manages the electronic commerce aspects of the system
- the process begins when a media provider registers his encoding software with the Mpe Server and obtains an "artist key". With this unique and personal artist key, the media provider can encrypt media files using the ripper. These media files are executable to play and to perform the electronic commerce functions. They may contain audio, pictures or other data.

    Once encoded with the "artist key", the artist freely distribute his media files without fear of the contents being stolen. To obtain compensation though, he must perform the next step.
- next the artist may obtain a "song key" from the Mpe Server which is used to add encrypted digital rights to the media file. These rights include a description of who should be compensated, and how much they should receive for each download. The media files can now be made freely available anywhere on the world wide web, with the security that the artist will be paid for each download that is executed.
- end users set up accounts at the Mpe Server by depositing a sum of money which can be debited against. As well, a fingerprint of their computer is used as their identification to the Mpe Server. This is the same fingerprint that media files they purchase will be bound to.
- when the end user downloads an Mpe media file, he can click on it and only a portion of the contents will play (a "teaser"). The execution of the media file will provide a "buy button", which, when activated, will send a "buy" data packet to the Mpe server.

    As described above, the digital wallet of the end user will be debited the corresponding amount, and a "song key" downloaded to the end user. The song key automatically de-crypts the media file and binds it to the end user's computer and/or portable device.

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10   **What we claim is:**

1.   A method of securely distributing media files comprising the steps of:
binding an encrypted media file to an end user computer while being decrypted.

2.   A method of securely distributing media files comprising the steps of:
15   encrypting a media file using a first encryption key; and
encrypting digital rights into said encrypted media file using a second encryption key.

3.   A method of securely distributing media files comprising the steps of:
generating an executable, encrypted media file.

20

4.   A method of securely distributing media files comprising the steps of:
generating an executable, encrypted media file which will execute to play only a portion of the
corresponding original media file, without use of a decryption key.

25   5.   A system for executing the method of any one of claims 1 through 4.

6.   A computer readable memory medium for storing software code executable to perform
the method steps of any one of claims 1 through 4.

30   7.   A carrier signal incorporating software code executable to perform the method steps of
any one of claims 1 through 4.

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